REMARKS

By an Office Action dated July 29, 2004 in the file of the above-identified patent application, the Examiner again rejected the application based on alleged lack of enablement. Again the applicants have responded herewith and make arguments here why this rejection is ill founded. Reconsideration of the merits of the patent application is respectfully requested in view of these changes.

The Examiner continues to argue that the evidence submitted by the applicants does not make it clear that the physiological effect of lowering cholesterol would be achieved by inhibiting ABC1 activity in the intestine of an individual. To advance the prosecution of the case, and obviate this particular concern, the applicants have canceled Claim 3 from the application. Accordingly, the method claims as currently residing in this case do not recite that the level of LDL cholesterol in the individual be decreased. The claims do recite that transport of cholesterol by the ABC1 protein is inhibited, a result which is not in doubt.

The Examiner argues that there may be more than one mechanism responsible for cholesterol uptake in the gut of an animal or human. The applicants assert that this assertion, if true, is not dispositive of the applicants claimed method. It is demonstrated here that ABC1 is a protein which acts as an active transport mechanism for cholesterol in the intestines of individuals, and that mechanisms are known, and enabled to inhibit that particular molecule in its transport. Inhibiting cholesterol uptake in the gut, even in part, is still useful and is enabled.

The applicants agree that the regulation of cholesterol in the serum of animals and humans is complex. There may be other cholesterol transport mechanisms in individuals. However, the claims have been limited to describe and claim only what the applicants believes they have demonstrated, that ABC1 is an active mechanism of cholesterol transport in the intestine and that the activity of ABC1 can be inhibited by drugs such as sulfonylurea. The limited claims presented by the applicants are enabled.

In the Office Action the Examiner argues that the method of selectively inhibiting cholesterol uptake does not avoid inhibition of cholesterol secretion. However, cholesterol is secreted in the liver, not in the intestine. The inhibition of ABC1 activity in the intestinal lumen will avoid the reverse transport effect of ABC1 which normally captures cholesterol from the intestinal lumen. Such inhibition would not necessarily have any effect on remote parts of the body, such as the liver, where cholesterol is secreted. It is known that the same ABC1 acts as a transport mechanism for cholesterol out of the membrane of cholesterol producing cells in the liver, as discussed in the specification on page 5 beginning on line 20.

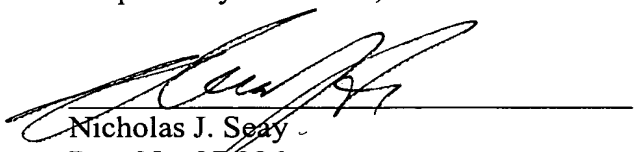
It is the applicants here who have identified the other function of ABC1, which is the uptake of liver in the intestines. It is for this reason that the inhibitor is desired to be delivered principally or only to the intestine, so as to selectively inhibit the cholesterol uptake mechanism without interfering with the secretion mechanisms in any way.

The Examiner argues that even though sulfonylurea drugs are known to be active inhibitors of ABC1 that there is a large quantity of experimentation required to determine how to administer, control side effects and use an inhibitor to inhibit net cholesterol uptake across the gut. The applicants believe that argument is misguided. The applicants believe that cholesterol is not substantially secreted into the gut in the intestinal wall, but in fact at this site, cholesterol transport is from the gut into the bloodstream. It is readily possible to inhibit that transport by administering sulfonylurea drugs orally as clearly recited in the specification and claims of the application. The fact that there may or may not be side effects is not a reason to deny that the method as claimed in the application is efficacious for the purpose recited, which is to inhibit active transport by the ABC1 gene in the intestinal wall.

Accordingly, it is submitted by the applicants here that the Examiner's rejection is poorly reasoned and should be reconsidered. A reconsideration of the merits of this patent application is respectfully requested.

A separate petition for extension of time is submitted herewith so that this response will be considered as timely filed. Please charge the fee to Deposit Account No. 17-0055.

Respectfully submitted,



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